FILE COPY

Titusville Amateur Radio Club

# TARC NEWSLETTER

March 1989

## Officers

President: Bud Hughes K4CWG 269-0779
Vice Pres: Bob Nedimeyer W4VQB 269-1878
Secretary: Dennis Wren N4SDI 269-1762
Treasurer: Clyde Lee K4EOS 267-9375

## President's Corner

For those of you who do not know, we have lost another dear friend to the Silent Key Club. Hal Harmon, N4EZD who had just joined our club, leaves an empty chair among us.

Miscellaneous ham gear is being offered by the estates of both Hal – N4EZD and Earl – WD4CTD. For equipment and pricing contact either Les – K4SJC, Dan – K3KS, or yours truly.

Don't forget the upcoming Indian River Raft Race scheduled for the last Saturday in April. Communication support has been requested... contact Pike – W4EPU and volunteer your services... it's gonna be fun.

Swap table nos. V–10 and V–11 have been secured at the Orlando Hamcation & Computer Show to be held April 7th, 8th, and 9th. The tables will be available for sale of gear and will make a good rendezvous point for all of us who attend.

Those who ordered advanced tickets and have not picked them up see Clyde – K4EOS.

Tune into TCI channel 9 for a reminder of oiur next club meeting... see you Tuesday.

73's, Bud – K4CWG

## February Meeting Minutes

The February meeting was called to order at 7:18 p.m. local time. The January minutes were read and accepted. Clyde (K4EOS) reported that the treasury has a balance of $406.25 with $50.25 in petty cash.

Still no answer on the phone rate. Les (K4SJC) reported an article in Florida Skip stated there would be no refund in phone rates. After some discussion it was brought up that other clubs should be approached to see what they are doing about it.

Pike (W4EPU) will be chairman for the Indian River raft race; he

See **Minutes** on back.

## Classifieds

Free – Magazines: Radio–Electronics, Compute!, Compute!'s Gazette, Doug – N4QVY, 268–1934.

## Upcoming Events

> **March 28**, April 25 – next TARC meetings, 7 p.m., JayCees Building on Singleton Ave.
> Every Thursday night – TARC Friendship Net, 7 p.m., 146.91 MHz
> Every 3rd Saturday – SBARC / ARRL exams, 9:30 a.m. registration, FIT room Q20 under ham radio mast
> April 7–9 – Orlando Hamcation, Orange County Civic Center (I–4, Exit 29), $8.00 door. Ph (407) 657–9052 for info.

## FRACTIONS!
### by Ozzie N4SCY
### N4SCY @ KB4LB

An amazing phenominon has been taking place recently. Everyone is going metric! Finally, after all these years. But what is making people type out 5.25 when referring to the size of floppy disks is that in the modern, computer age, there is no good represntation of fractions.

In fact, we can go back to an earlier age for a fairly elegant solution. I first ran across it in CCITT telelgram message format documents, and it seemed like such a good idea, I've used it ever since.

The problem with fractions is telling where the whole number stops, and where the fraction begins. A "space" character might not be obvious enough (like 5 1/4), but the space might be lost in transmission. It seems that many people would have just run the numbers together, like 51/4. VERY confusing. The best way is to seperate the two sections of a number with a dash, thereby making our floppy disk size of 5–1/4 inches a more "human readable" number for machine transmission.

In fact, in looking over the *Radio Regulations for the Maritime Mobile Service* in researching this article, I also found that per cent was stated as "0/00".

See **Fractions** on page 3.

**Printing Courtesy Of**

Brevard Office Equipment Inc.
269-2327

# Bulletins

Date: 03-11-89 15:06:18
From: CARL ZELICH / AA4MI / ARRL Assistant Director, SE Division
To: DOUG REED
Subj: ARRL NO-CODE STUDY COMMITTEE

President Larry Price, W4RA, has appointed the ARRL No-Code Study Committee. The committee's charge is to explore the implications of a no-code amateur license and make a report to the Board of Directors at its Second 1989 meeting. The committee members are:

-------ARRL representatives------
George Wilson, III, W4OYI, ARRL Vice President, 1649 Griffith Av, Owensboro, KY 42301
Rodney Stafford, KB6ZV, ARRL Director, 777 N. 1st St, San Jose, CA 95112

-------General amateur community------
John Crovelli, W2GD, 200 Woolf Rd, Milford, NJ 08848
Ken Kopp, K0PP, P O Box 848, Anaconda, MT 59711

-------Amateur Radio Industry Interests-----
Craig Lamb, N7ML, CEO of Amateur Electronic Applications, 16517 73rd SE, Snohomish, WA 98290
Y Juge, Jr, W5TOO, Director of Market Planning, Radio Shack, Tandy Corp, 2000 Thousand Oaks Dr, Burlson, TX 76028

-------ARRL HQ Liason----------
David Sumner, K1ZZ, 225 Main St, Newington, CT 06111

-------Special Liasons---------
Tom Atkins, VE3CDM, President CRRL, 55 Havenbrook Blvd, Willowdale, Toronto, Ont M2J 1A7
Leland Smith, W5KL, President QCWA, HCR 31 Box 147, Jasper, AR 72641

**HR AMSAT NEWS SERVICE BULLETIN 070.02 FROM AMSAT HQ SILVER SPRING, MD MARCH 11, 1989 (Edited for Packet by KD9QB, AMSAT Area Coordinator - Indianapolis)**

MICROSAT Information And Details To Appear In Numerous Magazines Soon

Starting in March there will be a "flood" of information which will be available to AMSAT members and OSCAR enthusiasts about the new series of Amateur Radio Satellites which will are currently scheduled to be launched late this summer aboard a ARIANE IV rocket. To be published later this month will be the new AMSAT-NA Satellite Journal; the featured article for this "first edition" will contain a substantial amount of data about the four MICROSATs which are presently being assembled by volunteers in the Boulder, CO area. This article is being authored by Courtney Duncan, N5BF, and Jan King, W3GEY. Also, the May issue of 73 Magazine will likewise contain an article by Courtney Duncan about the MICROSATs. The entire May issue of 73 Magazine will be devoted to OSCAR satellites and will include a wide range of topics concerning all aspects of assembling, building, operating, and maintaining a station for amateur radio satellite operation. In the May and June issue of QST, look for another series of articles about the MICROSATs which will be authored by Bob McGwier, N4HY, and Doug Loughmiller, KO5I.

Each of these upcoming articles will cover different aspects of the MICROSATs from their inception, discussions about their "modular" technical design, software, and information about how to operate the "store-and-forward" packet radio pair, that is, PACSAT/NA and PACSAT/LU. Also included will be a discussion about the WEBERSAT MICROSAT which will have the capability to send pictures back from space! And last but certainly not lest, the QST article will also include a discussion about the educational possibilities of DOVE (Digital Orbiting Voice Encoder). DOVE will contain a voice synthesizer that will possess the capability to speak five different languages. DOVE is designed to be received on simple 2M receivers or inexpensive scanners. So be sure to start looking for these articles because they will contain "everything you ever wanted to know" about the MICROSATS.

**HR AMSAT NEWS SERVICE BULLETIN 070.03 FROM AMSAT HQ SILVER SPRING, MD MARCH 11, 1989 (Edited for Packet by KD9QB, AMSAT Area Coordinator - Indianapolis)**

Bill Eitel --- Silent Key

In the March 6, 1989 edition of "Defense News" there was an obituary notice of the death of William Eitel, age 81, who was a early pioneer in the Silicon Valley and a long-time amateur radio enthusiast. Bill Eitel, WA7LRU/W6UF/W6AY, along with a partner, founded the Eitel-McCullogh (EIMAC) company. Bill was an early participant in the amateur radio satellite program; he was active with the Project OSCAR group in the 1960's, and as Life Member No. 9, provided strong personal and financial support to AMSAT programs in the 1970's. From 1972 to 1975 he served as chairman of the Amateur Satellite Service Committee (ASSC), a coordinating body with representation from Project OSCAR, AMSAT, and the ARRL. In this position, he undertook a number of initiatives aimed at garnering support for the amateur radio satellite program from the highest levels in the Government.

Bill was not as active in the past several years due to failing health, but continued to take a strong interest in AMSAT programs. He will be missed.

**From: JOHN MAGLIACANE WALL TOWNSHIP To: ALL**
**Subj: SPACENEWS 13MAR89 <SPC9031**
--------- SpaceNews ---------

MONDAY MARCH 13, 1989

SpaceNews originates at KD2BD in Wall Township, NJ, and is available on packet radio bulletin board stations across the North America and around the world on the MTTBS telephone BBS at (201) 494-3649, the Unix USENET News Network, and also on WangNet.

* SHUTTLE FREQUENCIES * ----------
The Space Shuttle transmits on three frequency bands: UHF, S-band and Ku-band. The UHF frequencies use AM and are very easy to copy. These frequencies are used for launch, landing, Extra Vehicular Activity (EVA, or "space walk") activities, and also as an additional voice downlink when other channels are in use or when the current ground station in use has no S-band capability.

The UHF-AM frequencies used by the Space Shuttle include:

243.0 MHz : Standard military aircraft emergency frequency 259.7 MHz : Air-to-ground or EVA suit to orbiter 279.0 MHz : EVA suit to orbiter or suit to suit 296.8 MHz : Air-to-ground or orbiter to EVA suit

The primary orbiter downlink is the S-band system. Here, voice channels are digital slope delta modulated and are muliplexed with shuttle telemetry. Most of the TV downlink is also carried on S-band using wide-band FM.

The S-band frequencies include:

2250.0 MHz : Wide-band FM downlink of main engine analog telemetry during launch or TV during in-orbit operations 2287.5 MHz : Primary digital downlink

The Ku-band system operates in conjunction with the TDRS satellites on an uplink of 15.003 GHz, using high-gain antennas. The data rate used here is VERY high (50 Mbits/sec range).

* OSCAR-9 NEWS * ---------- All four HF beacons on OSCAR-9 have been switched on and are transmitting telemetry in 12 wpm morse code. The frequencies are 7.002, 14.002, 21.002 and 29.510 MHz. Interesting propagation effects can be noted when monitoring more than one beacon simultaneously.

On Thursdays (UTC), the VHF beacon will transmit telemetry in plain english using its Digitalker. The telemetry channels to be transmitted include:

08 : Battery Pack A Temperature (C) 09 : Spacecraft +X Facet Temperature (C) 17 : Magnetometer Experiment -Hz Fine 18 : Battery Pack B Temperature (C) 19 : Spacecraft -X Facet Temperature (C) 27 : Telecommand Receiver Current (mA) 28 :

See **Bulletins** page 3.

**Fractions...**
Therefore, if (for some profound reason) you were bragging about a mortgage rate, you would copy that out as "15-1/4-0/00" (after all, a rate like that would be worth bragging about).

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Ozzie N4SCY, PO Box 641, Cape Canaveral FL, USA 32920

+1 407 267 6844 Voice +1 407 268 5316 Data (300/1200, 7Ei)

PS: Lollipops will be given at the '89 Orlando Hamfest to the first 10 people who can tell me the reference in the title of the article.

**Bulletins...**
Radiation Experiment Temperature (C) 29 : Spacecraft -Y Facet Temperature (C)

The VHF beacon transmits on 145.825 MHz FM with 300 mW of transmitter power. The HF CW/A0 beacons run 100 mW each.

* MAJOR SOLAR FLARE! * ---------- The Space Environment Services Center, in Boulder, Colorado reported that solar activity increased dramatically to "high" when solar region 5395 (N31E70) produced a major solar flare at 1405 UTC on 06Mar89. This flare was optically visible and saturated the GOES x-ray sensor at X12 (estimated peak is X15). Significant radio bursts were associated with this event. In white light, this solar region appeared as an extremely large group with all visible spots within the same penumbra. The region was at an unusually high latitude for such a large sunspot group.

* FEEDBACK WELCOMED * ---------- Feedback regarding SpaceNews can be directed to the author (John) via any of the following paths:

UUCP : ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd PACKET : KD2BD @ NN2Z

* SOURCES * ---------- Some of the news contained in this SpaceNews issue was obtained via OSCAR-9, OSCAR-11 and the KA2QHD and NN2Z PBBSs.

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**ARRL PFB NR 11 (ARLP011) 03/13/89**

The rising size of a sunspot cycle is an exciting experience for dx minded amateurs, but it is not all smooth sailing. When the solar flux rockets up day after day, as it has each month since December, there can be weird side effects, including almost total loss of long distance communication from a few minutes to the better part of the day.

The nearest thing to a total blackout that we have heard in quite a few years began around 1320 UTC March 6. Of the 10 meter beacons we usually hear over much of the world, only those in North America were audible, and these were below normal signal strength and fading badly. Then came sounds like that of a heavy surf breaking on a rocky shore. This was sun noise, of course. What would WWV be saying?

We were about to find out. Only their 20 MHz signal was audible by then, and it was just barely heard. A phone call to Boulder brought out that there had been a major flare at 1313 UTC and the solar flux was not available. Even at 2118 utc, the wwv flux figure of 212 was given as estimated. The WWV signals have been very good at times, but they have been up and down all week, to a degree that we have rarely heard in about 15 years of daily use. More often than not there has been trouble getting the entire bulletin content through. We also note that the bulletin at 0318 UTC March 13 predicts minor to major storm conditions continuing.

Thus far in March the solar flux has been consistantly lower than for the corresponding day in February, but the March curve is very much like its prehigh predecessors otherwise. Each has a rapid rise for about 10 days, followed by a much more gradual decline.

See **Bulletins 1** next column.

## The Editor's Desk

Another month has come and gone, and another newsletter is in its infancy (at this point), and I am in the process of generating filler (this article). First of all, I would like to thank Ozzie for his article, and to Bud for his **President's Corner**, which, by the time this goes to press, may make it to page 1. I'm hoping that I don't get into the same situation as the editor of a local computer club who writes ALL of the articles. Too much work for him, not to mention presenting a singular point of view.

The bulletin addressed to me from Carl Zelich was sent via the Tech-Talk bulletin board located here in Titusville, I assume that, given Carl's ARRL representative status, that this article is from an ARRL bulletin, and should be read as such. No-code is rearing its head again, and the opinions on no-code are many and varied. All you have to do is log onto a packet BBS and examine the bulletins on the subject. If you have an opinion on this subject, there is plenty of space for your opinion article in this medium, not to mention the contacts presented in Carl's bulletin.

Other bulletins were downloaded from the Tech-Talk BBS also. I have been having problems with packet lately as there seems to be a pulsating emission located somewhere near my house. The recurrance time is about 2.75 seconds, which seems to be often enough to eat up a portion of each long packet that I am trying to receive. Since TNC's need a completely good packet before it will pass it to the terminal, I get an extremely high (and aggravating) number of retry packets sent to me from the sending BBS, digipeater, or node.

Thanks to Steve Schindler for bringing Project Dove to my attention. This project concentrates on two main areas: education and peace. Read the bulletins for more information.

**Bulletins 1...**
This portion has been consistantly better than the rising one. Thus a gradual decline should begin early this week, and continue for the next two weeks, most of which will show more stable propagation than we have seen previously this month.

American sunspot numbers for March 2 through 8 were between 73 and 113 with a mean of 91.6 AR

--- ConfMail V3.31 * Origin: KA4BCD Packet Radio BBS (1:1089/14)

**ARRL BULLETIN NR 12 (ARLB012) 3/15/89**

In response to an ARRL petition, the FCC has proposed, in docket 89 65, to relocate beacon operation in the two meter band and 70 cm bands. On two meters, the proposal would move beacon operation from 144.05/144.06 mhz to 144.275/144.300 mhz. On 70 cm, beacons would move from 432.07/432.08 mhz to 432.3/432.4 mhz. As expected, the commission declined to propose changes in the 220 mhz beacon subbands at this time, citing its decision to reallocate the bottom two mhz of the 220 mhz band to the land mobile service. Comments on this proposal are due on or before June 12, 1989 AR

* Origin: KA4BCD Packet Radio BBS (1:1089/14)

**From: JOHN GUBERNARD To: ALL**
**Subj: 100TH BIRTHDAY OF MAJOR ARMSTRONG**
**Date: 17 Mar 89 02:54:00 GMT**

The year 1990 is a very important year in the history of Radio. The date of December 18, 1990 marks the 100th birthday of Major Edwin Howard Armstrong, who was the pioneer responsible for the advent of Wideband FM radio and the superhetrodyne receiver, which is used in every modern radio receiver. Because of his life-long dedication and devotion to the research and development of the radio industry, which some major U.S. corporations dismissed as unimportant, he should be properly recognized for his accomplishments in the radio communications field.

All through 1990, The Major Armstrong Memorial Amateur Radio Club (MAMARC) will be sponsoring events to commemorate his achievments in the radio broadcasting field. The club is seeking other amateur operators from around the world that are willing to research the accomplishments of the Major and to become an official MAMARC Special Event Station that will participate in around-the-world, FM-relayed contacts. These stations will be sent special QSL cards that will bear the callsign, W2XMN, which was Major Armstrong's callsign for the first experimental FM radio

See **Bulletins** on back.

The **TARC Newsletter** is (usually) published on a monthly basis. Articles are published based on their newsworthiness to TARC membership, space available, and ease of entry to the publishing medium.

Preferred transfer methods are EMail to N4QVY at Tech-Talk BBS, EMail on 2 meter packet to N4QVY@KB4LB or N4QVY@WD4HIM, direct packet, 3.5" AmigaDOS 880K disk, 3.5" MS-DOS 360K disk, 5.25" MS-DOS 360K disk, direct landline modem, and print / hand-written / hardcopy formats, in that order. Separate each paragraph with a blank line for ease of re-formatting a publishing format.

Article / classified deadline is two Fridays prior to the date of the monthly meeting. The next deadline is **April 14.**

Articles may be given to the editor, Doug - N4QVY, at the IHOP on net nights, or left with Bud - K4CWG, where it will hopefully make its way to the aforementioned editor.

**Minutes...**

will have information on this at the next meeting and take names of volunteers. Les (K4SJC) gave a repeater report. He said that the amplifier had been installed and worked for a short time then quit, it is again at Les's house for repair. Everything else is working ok. Wynn (WB4ZUY) reported that there had been problems with the tone decoder chip but hopes all is fixed now. If anyone has problems report them to Wynn.

Ron (N4SCZ) ask about the TVI committee as he has problems with cable channel 18. This brought up that so do others. Doug (N4QVY) offered to get with Ron and work on problem. Clyde (K4EOS) was named chairman for the Thursday night net. Anyone who would like to help run the net is asked to get in touch with Clyde. Wynn (WB4ZUY) reported that the Technical Committee had a meeting and that the repeater controller design is about the way it will stay. Wynn will also build some spares in case of problems. It was also stated that the repeater does not get much use. Les (K4SJC) said if you would like to see some feature on the repeater let the tech committee know.

Bud (K4CWG) said he will have a list of equipment from a silent key that members will be given first chance to buy. Bob (W4VQB) brought up that some visitors told him that no one had talked to them and that all should try to talk to any visitors. The meeting had a short break followed by a talk on packet radio given by Ozzie (N4SCY).

– Dennis / N4SDI, Secy.

**Bulletins...**

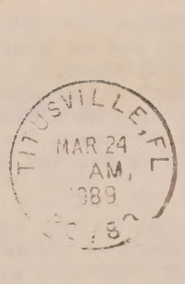
station, which was located in Alpine, NJ. These QSL cards wou uted to other stations as they contact them after each around-the-world FM QSO.

If you are interested in participating in this historical occasion and becoming an official MAMARC/W2XMN Special Event Station, please contact Barry Groupp, N2HDW, the 100th Birthday Committee chairman with the following information:

Name Address Callsign License Class Current Operating Bands

Send this information with a SASE to the following address.

M.A.M.A.R.C. c/o 100th Birthday Committee Box 581 Alpine, New Jersey 07620



W4 VQB
Bob Nedimyer
868 Hunter Park
Titusville Fl 32780

YOUR CLUB DUES EXPIRE: JAN 90
73 GL ES GUD DX de TARC !